CLAIMS

What is claimed is:

1. A method for storing a structured document in its native format in a database
comprising the steps of:

    a)   receiving a structured document;

    b)   generating a hierarchical node tree comprising a plurality of nodes, wherein
the node tree represents the structured document; and

    c)   storing the plurality of nodes in at least one record in the database.

2. The method of claim 1, wherein generating step (b) further comprises:

    (b1)   parsing the structured document into the plurality of nodes; and

    (b2)   linking each of the plurality of nodes via pointers to form the hierarchical
node tree.

3. The method of claim 1, wherein each record comprises a plurality of node slots,
wherein each node slot includes a pointer pointing to a node of the plurality of nodes.

4. The method of claim 3 further comprising:

    (d)   storing the at least one record on at least one page.

5. The method of claim 4, wherein each page comprises a plurality of record slots,
wherein each record slot includes a pointer pointing to a record stored on the page.

6. The method of claim 5, wherein each node is identified by an identifier comprising a record slot number corresponding to the record slot pointing to the record in which the node resides and a node slot number corresponding to the note slot pointing to the node.

7. The method of claim 5, wherein a node comprises a plurality of child pointers if the node has children, wherein each of the plurality of pointers points to a child node.

8. The method of claim 7, wherein a child pointer points to a node slot pointing to the child node if the child node is a separate node.

9. The method of claim 8, wherein a node slot in a first record in a first page points to a record slot in a second page and a node slot in a second record if the child node is a separate node stored in the second record on the second page.

10. The method of claim 7, wherein the node further comprises an in-lined character array.

11. The method of claim 10, wherein a child pointer describes the child by pointing to the in-lined character array.

12. The method of claim 7, wherein a child pointer describes the child and its value.

13. The method of claim 1, wherein the structured document is written in Extensible

Markup Language.

14. A computer readable medium containing programming instructions for storing a structured document in its native format in a database the instructions for:

a)   receiving a structured document;

5   b)   generating a hierarchical node tree comprising a plurality of nodes, wherein the node tree represents the structured document; and

c)   storing the plurality of nodes in at least one record in the database.

15. The computer readable medium of claim 14, wherein generating instruction (b)

10   further comprises:

(b1)   parsing the structured document into the plurality of nodes; and

(b2)   linking each of the plurality of nodes via pointers to form the hierarchical node tree.

15   16. The computer readable medium of claim 14, wherein each record comprises a plurality of node slots, wherein each node slot includes a pointer pointing to a node of the plurality of nodes.

17. The computer readable medium of claim 16 further comprising:

20   (d)   storing the at least one record on at least one page.

18. The computer readable medium of claim 17, wherein each page comprises a plurality of record slots, wherein each record slot includes a pointer pointing to a record stored on the page.

19. The computer readable medium of claim 18, wherein each node is identified by an identifier comprising a record slot number corresponding to the record slot pointing to the record in which the node resides and a node slot number corresponding to the note slot pointing to the node.

20. The computer readable medium of claim 18, wherein a node comprises a plurality of child pointers if the node has children, wherein each of the plurality of pointers points to a child node.

21. The computer readable medium of claim 20, wherein a child pointer points to a node slot pointing to the child node if the child node is a separate node.

22. The computer readable medium of claim 21, wherein a node slot in a first record in a first page points to a record slot in a second page and a node slot in a second record if the child node is a separate node stored in the second record on the second page.

23. The computer readable medium of claim 20, wherein the node further comprises an in-lined character array.

24. The computer readable medium of claim 23, wherein a child pointer describes the child by pointing to the in-lined character array.

25. The computer readable medium of claim 20, wherein a child pointer describes the

child and its value.

26. The computer readable medium of claim 14, wherein the structured document is written in Extensible Markup Language.

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27. A system for storing a structured document in its native format in a database comprising:

a computer system coupled to at least one data storage device;

a database management system in the computer system; and

10   a storage mechanism in the database management system for receiving a structured document, generating a hierarchical node tree comprising a plurality of nodes, wherein the node tree represents the structured document, and storing the plurality of nodes in at least one record in the at least one data storage device.

15   28. The system of claim 27, wherein the storage mechanism further comprising a parser for parsing the structured document into a plurality of nodes and a node tree generator for linking each of the plurality of nodes via pointers to form the hierarchical node tree.

29. The system of claim 27, wherein each record is stored in a page, wherein each record
20   comprises a plurality of node slots, each of which includes a pointer pointing to a node in the node tree.

30. The system of claim 29, wherein each page comprises a plurality of record slots, each

of which includes a pointer pointing to a record stored on the page.

31. The system of claim 30, wherein each node is identified by an identifier comprising a record slot number corresponding to the record slot pointing to the record in which the node resides and a node slot number corresponding to the note slot pointing to the node.

32. The system of claim 29, wherein a node comprises a plurality of child pointers if the node has children, wherein each of the plurality of pointers points to a child node.

33. The system of claim 32, wherein a child pointer points to a node slot pointing to the child node if the child node is a separate node.

34. The system of claim 32, wherein the node further comprises an in-lined character array.

35. The system of claim 34, wherein a child pointer fully describes the child by pointing to the in-lined character array.

36. The system of claim 27, wherein the structured document is written in Extensible Markup Language.